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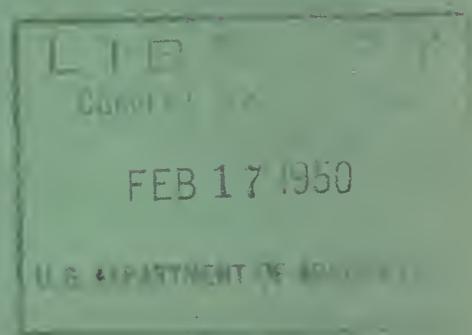


FEDERAL-STATE COOPERATIVE
SNOW SURVEYS AND IRRIGATION WATER FORECASTS
for

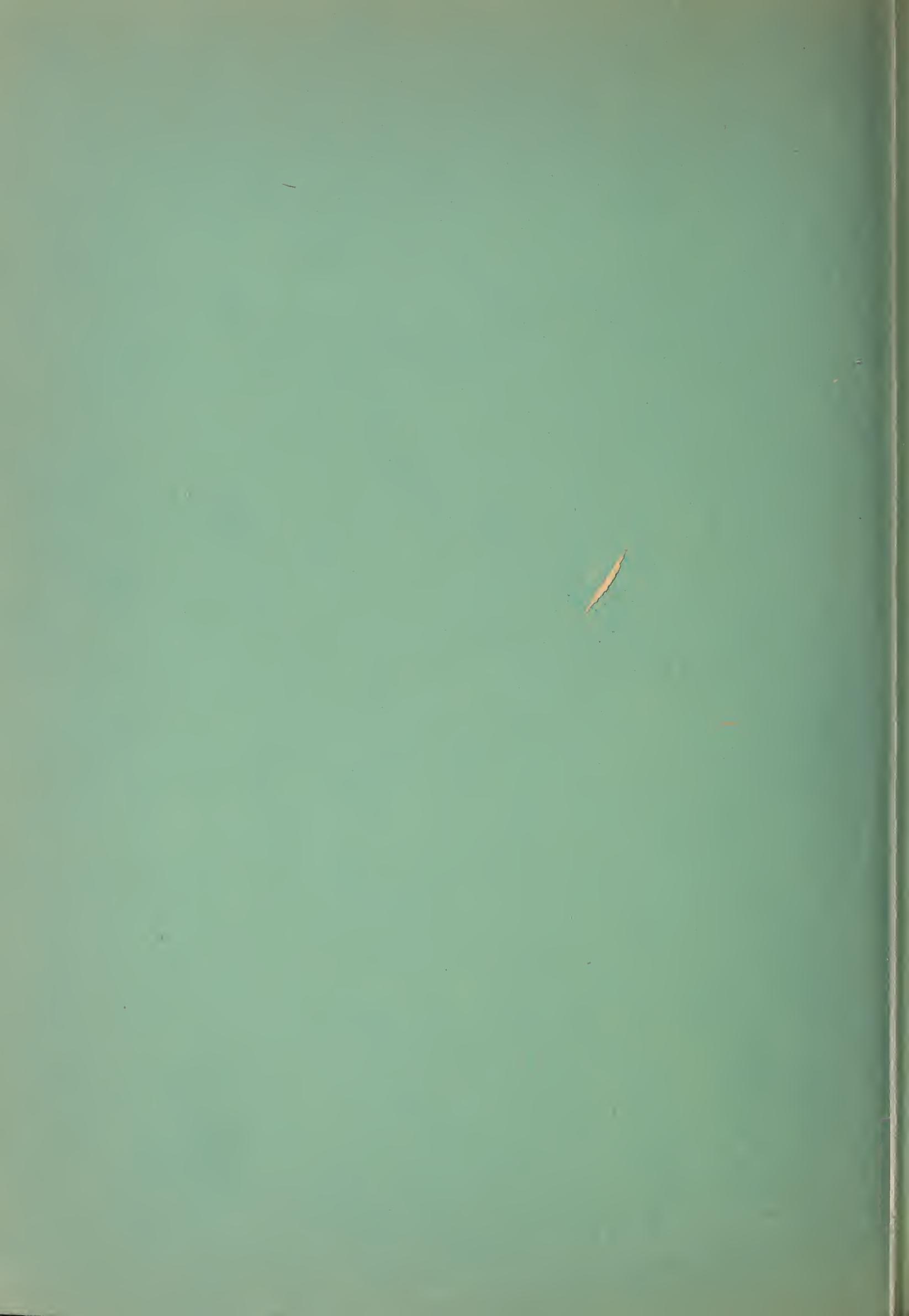
**Montana and Yellowstone River
Tributaries in Wyoming**

By
Division of Irrigation, Soil Conservation Service
United States Department of Agriculture
and
Montana Agricultural Experiment Station

In cooperation with the U. S. Forest Service, U. S. Geological Survey, National Park Service, U. S. Bureau of Reclamation, State Engineers of Montana and Wyoming and other Federal, State and local organizations.



As of
FEB. 1, 1950



FEDERAL-STATE COOPERATIVE
SNOW SURVEY AND IRRIGATION WATER FORECASTS

FOR
MONTANA and NORTHERN WYOMING

Upper Missouri and Upper Columbia River
Basins

Report Prepared
by

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Soil Conservation Service

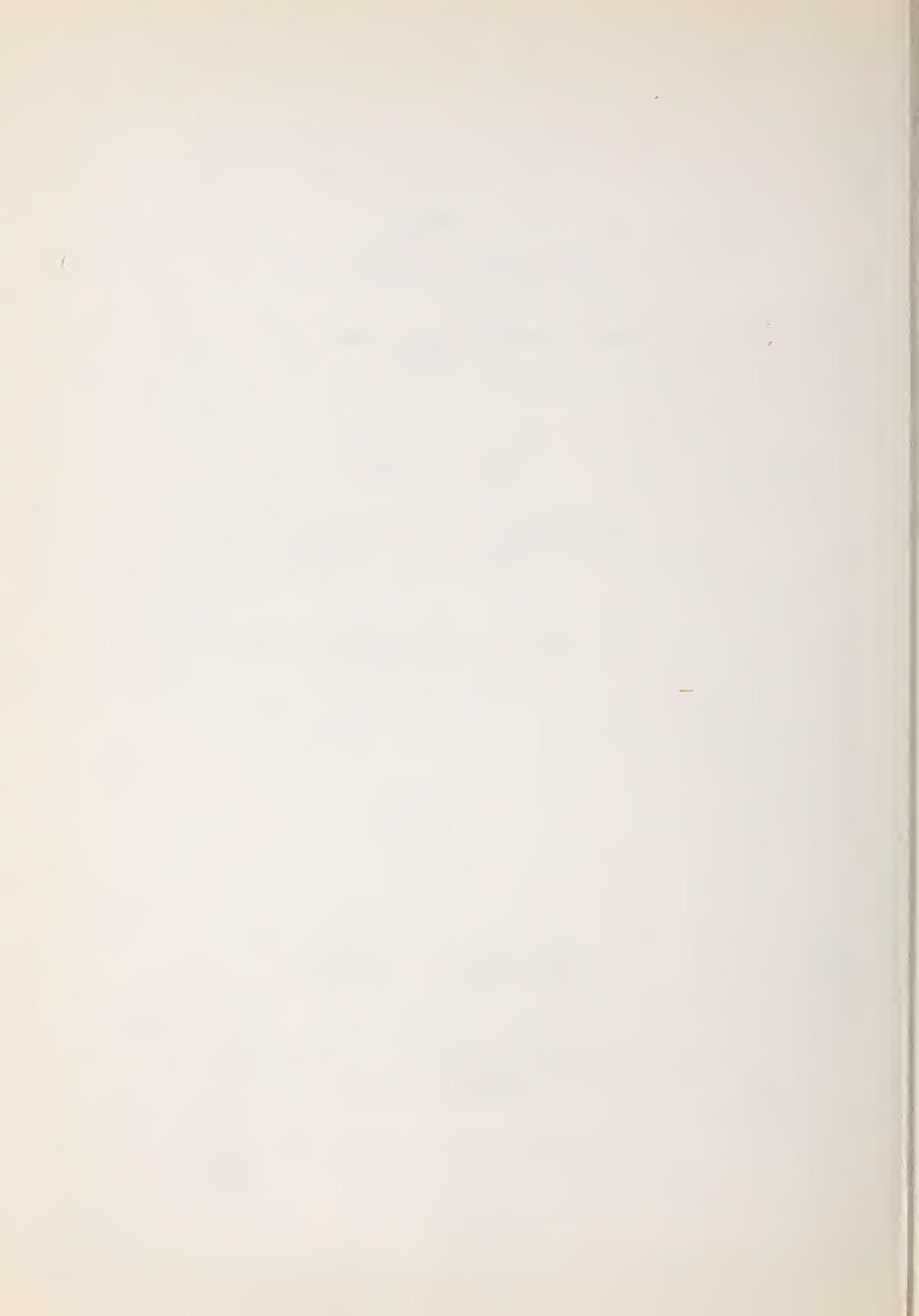
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Montana State College

Division of Irrigation
Soil Conservation Service

and

Montana Agricultural Experimental Station
Bozeman, Montana





Drainage Basin	Location	Sec. Number	Elev.	Range Lat.	Range Twp.	Record Long.	Measuring Dates ^a	Measured By ^b	Drainage Basin	Location	Sec. Number	Elev.	Range Lat.	Range Twp.	Record Long.	Measuring Dates ^a	Measured By ^b	
<u>MISSOURI RIVER (HEAD)</u>																		
Lower New	Ridge	11E3	7400	27	14S	2W	1948	3,4,5	9	Beavers Kill	9E8	6900	6	13N	102W	1948	2,3,4,5	Pd.Obs.
Lower New	Canyon	11E4	6930	20	13S	2W	1948	3,4,5	9	Owl Creek	8F1	8700	30	13N	101W	1948	2,3,4,5	Pd.Obs.
Lower	Leighlin	11E2	6950	15	5S	9W	1948	3,4	1	Tensleep R.S.	7E3	6300	30	49N	66W	1935	4,5	1
Lower	Firehole	11E1	6550	18	1S	9W	1948	3,4	1	Timber Creek	9E2	6800	25	47N	103W	1948	4,5	1
<u>MISSOURI RIVER (MID)</u>																		
Lower	Firehole	12D10	7600	12	8S	10W	1948	3,4	1	Wood River	9F7	8000	28	16N	103W	1939	2,3,4,5	1
Lower	Stone	12D9	8100	11	8S	10W	1948	3,4	1	(S. S. S. R. R.) WYO.								
Lower	Firehole	12E1	7400	9	10S	15W	1948	3,4	1	East Entrance	10E0	7000	17	52N	109W	1948	1,2,3,4,5	5
Lower	Firehole	12D12	6550	12	9S	15W	1948	3,4	1	Sylvan Pass	10E5	7100	12	52N	110W	1936	1,2,3,4,5	5
Lower	Firehole	12E2	7090	15	10S	15W	1948	3,4	1	TONGUE RIVER WYO.								
Lower	Firehole	12D11	6500	27	6S	15W	1948	3,4	1	Big Goose	7E2	7700	4	53N	86W	1935	4,5	1
<u>MISSOURI RIVER (MID)</u>																		
Lower	Firehole	12D3	7440	28	3S	18W	1948	3,4	1	POWDER RIVER WYO.								
Lower	Firehole (below)	12D1	6900	24	3S	18W	1948	3,4	1	Red Fork	7E1	7000	18	13N	85W	1936	4,5	Pd.Obs. 1
Lower	Firehole	12D5	6700	22	3S	17W	1948	3,4	1	Sour Dough	6E1	8500	17	14N	84W	1936	4,5	
Lower	Firehole	12D2	7100	4	2S	19W	1934	2,3,4,5	1,2									
Lower	Firehole	12D6	7310	25	7S	16W	1948	3,4	1									
Lower	Firehole	12D8	7300	24	6S	17W	1948	3,4	1									
Lower	Firehole	12D7	6720	10	6S	16W	1945	3,4,5	1									
<u>MISSOURI RIVER (MID)</u>																		
Lower	Firehole	12D11	7000	19	3S	12W	1948	3,4	1	KOOTENAI RIVER								
Lower	Firehole	12D15	6450	15	1S	12W	1934	3,4,5	2	Bearc Mountain	15B1	6000	1	25N	31W	1937	4,5	1
Lower	Firehole	12D13	6300	15	2S	12W	1948	3,4	1	Blue Bird Basin	11A1	6800	24	37N	26W	1937	4,5	1
<u>MISSOURI RIVER (MID)</u>																		
Lower	Firehole	12E1	6100	30	10S	2W	1948	3,4	1	Brush Creek	11A1	5000	13	30N	18W	1911	3,4	1
Lower	Firehole	12D3	6950	22	8S	7W	1945	3,4,5	1	Red Mountain	15A1	6000	4	36N	29W	1937	3,4,5	1
<u>MISSOURI RIVER (MID)</u>																		
Lower	Firehole	12D2	6900	13	1S	3W	1948	3,4	1	FLATHEAD RIVER								
Lower	Firehole	12D1	6125	28	9S	3W	1948	3,4	1	Big Creek	13B3	6750	687	22N	18W	1911	4,5	1
<u>MISSOURI RIVER (MID)</u>																		
Lower	Firehole	12E5	6550	22	11S	3E	1934	1,2,3,4,5	2	Brush Creek	11A1	5000	13	30N	26W	1937	3,4	1
Lower	Firehole	12E7	6700	34	13S	5E	1934	1,2,3,4,5	2	Cattle Queen	13A1	4700	7	35N	17W	1939	3,4	5
Lower	Firehole	12E2	7500	14	14S-44'	110°-42'	1935	3,4	5,6	Desert Mountain	13A2	5600	24	31N	19W	1937	1,2,3,4,5	1
<u>MISSOURI RIVER (MID)</u>																		
Lower	Firehole	10D1	8100	14	5S	6E	1935	3,4,5	2,6	Elk Mountain	12B7	7000	20	22N	10W	1911	3,4	2
Lower	Firehole	10D3	6600	22	4S	6E	1934	3,4,5	2,6	Goat Mountain	12B7	5770	35	32N	22W	1912	4,5	1
Lower	Firehole	10D2	6600	30	3S	7E	1935	2,3,4	6,7	Hell Roaring Divide	14A3	6330	3	17N	17W	1911	3,4,5	1
Lower	Firehole	10D4	6700	10	13N	7W	1934	3,4,5	2	Rainy Lake	13B6	1300	11	16N	16W	1947	3,4,5	1
<u>MISSOURI RIVER (MID)</u>																		
Lower	Firehole	10D1	7150	1	11S	5E	1934	1,2,3,4,5	2	Snow Lab. # 16	13A9	5200	15	29N	11W	1946	1,2,3,4,5	2
<u>MISSOURI RIVER (MID)</u>																		
Lower	Firehole	10D1	8100	14	5S	6E	1935	3,4,5	2,6	Spotted Bear Mt.	13B2	7000	23	25N	15W	1948	3,4	1
Lower	Firehole	10D2	6600	22	4S	6E	1934	3,4,5	2,6	Strawberry Lake	13B10	6500	11	28N	19W	1945	3,4	1
Lower	Firehole	10D3	6700	10	13N	7W	1935	2,3,4,5	2	Trinkus Lake	13B1	6500	9	25N	17W	1948	3,4	1
Lower	Firehole	10D4	6800	19	8S	6W	1934	1,2,3,4,5	2	Trot Lake	13B11	3600	21	28N	17W	1948	3,4	1
<u>MISSOURI RIVER (MID)</u>																		
Lower	Firehole	10D5	6500	22	5S	6W	1935	2,3,4,5	2	Upper Holland Lake	13B5	7000	28	20N	16W	1948	3,4	1
<u>MISSOURI RIVER (MID)</u>																		
Lower	Firehole	10D6	7200	11	2S	10W	1948	3,4	1	UPPER CLARK FORK								
Lower	Firehole	10D7	6600	22	4S	6E	1934	3,4,5	2,6	Chessman Reservoir	12C5	6200	2	8N	5W	1936	1,2,3,4,5	2
Lower	Firehole	10D8	6700	11	1N	7W	1938	2,3,4,5	1	East Fork Ranger Stn13D1	5400	16	2N	17W	1937	4	1	
Lower	Firehole	10D9	6600	30	20N	10W	1948	3,4	1	El Dorado Mine	13D9	7800	23	8N	12W	1946	4	11
Lower	Firehole	10D10	6500	30	20N	10W	1948	3,4	1	Gold Creek Lake	13C8	7200	14	8N	12W	1946	4	11
Lower	Firehole	10D11	6500	31	21N	10W	1945	3,4,5	2	Intergaard	13C4	6150	6	5N	13W	1939	2,3,4	3
Lower	Firehole	10D12	7000	20	22N	10W	1934	3,4	2	North Fork Jocko	13B7	6330	3	17N	17W	1911	3,4	1
Lower	Firehole	10D13	6800	21	23N	12W	1950	3,4	1	Picnic Grounds	12C6	6500	22	5N	6W	1940	2,3,4	3
Lower	Firehole	10D14	6800	21	23N	12W	1935	2,3,4,5	2	Pipestone Pass	12D1	7200	11	1N	7W	1938	2,3,4,5	1
Lower	Firehole	10D15	6700	21	23N	12W	1938	2,3,4,5	2	Rainy Lake	13B6	1300	11	16N	16W	1947	3,4,5	1
Lower	Firehole	10D16	6700	20	22N	10W	1934	3,4	2	Skalkaho Summit	13D3	7258	30	6N	17W	1937	4	1
Lower	Firehole	10D17	6800	19	21N	12W	1950	3,4	1	Slide Rock Mountain	13C2	7100	26	10N	16W	1937	4	1
Lower	Firehole	10D18	6800	19	21N	12W	1934	3,4	1	Southern Cross	13C5	6500	9	5N	13W	1939	2,3,4	3
Lower	Firehole	10D19	6800	19	21N	12W	1934	3,4	1	Stemple Pass	13C1	6900	16	13N	7W	1934	3,4,5	2
Lower	Firehole	10D20	6800	19	21N	12W	1934	3,4	1	Storm Lake No. 2	12C7	7780	19	1				

Numerals 1,2,3,4, and 5 refer to January 1, February 1, March 1, April 1, and May 1.

• Numerals refer to Agency that secures the snow survey as follows:

1. U. S. Forest Service
2. U. S. Geological Survey and U. S. Engineer Corp
3. Montana Power Company
4. U. S. Indian Service
5. National Park Service
6. Montana Experiment Station
7. City of Bozeman
8. Dominion Water and Power Bureau
9. U. S. Fish and Wildlife Service
10. U. S. Bureau of Reclamation
11. Doerlodge Citizens Committee

Obs. Paid Observer by Soil Conservation Service

008. Paid Observer by Soil Conservation Service

IRRIGATION WATER SUPPLY OUTLOOK 1950

Jefferson River Basin: Snow surveys indicate above average water equivalent for this time of year and almost equal to April 1 measurements.

Madison River: Snow surveys indicate about equal water equivalent for February and somewhat below April 1 figures.

Gallatin River: Snow surveys indicate generally below average water equivalent and much below April 1 figures.

Missouri Main Stem: Snow surveys indicate a water equivalent close to 30% above average and only about 20% below April 1 averages.

Upper Yellowstone in Wyoming: Snow surveys indicate an excellent water supply at this time of the year. Most stations are above average for February 1 and not far below April averages.

Lower Yellowstone in Wyoming: Snow surveys in the Wind, Big Horn, Popo Agie, and Shoshone River basins indicate an above average water supply by 50 per cent. The present snow pack is approximately equal to what is generally measured on April 1 and two months supply yet to come. Valley precipitation so far this season has also been above average.

Upper Columbia River in Montana: Snow surveys made on the Upper Kootenai River Basin in British Columbia indicate an above average snow pack as of February 1 and almost equal to April 1 measurements.

Flathead River: Snow surveys in this basin indicate an excellent water supply. Although there is not much comparative data for February 1, all measurements indicate as much or more than 1948 and 1949.

Upper Clark Fork: Snow survey measurements on this basin indicate that there is a "GOOD" supply of snow in the upper elevations. Most stations are only a little below the April 1 averages.

Although the outlook at the present is good over the entire area, a dry February or March could change the entire picture.

MONTANA SNOW SURVEYS January 1, 1950

SNOW COURSE	DRAINAGE BASIN	Date of Survey	Snow Depth (In.)	Water Equiv. (In.)	Density Per Cent	COMPARATIVE DATA			
						1949 Snow Depth	1949 Water Equiv.	1948 Snow Depth	1948 Water Equiv.
MISSOURI									
Yellowstone	Jan. 2	31.2	5.8	19.0	37.8	7.7	25.1	5.4	79.0
Yellowstone	Jan. 2	17.0	3.1	18.0	30.5	7.4	—	—	—
Yellowstone	Dec. 31	14.2	4.0	28.2	30.9	6.4	20.4	3.6	87.0
Yellowstone	Dec. 31	11.8	2.3	19.7	24.5	6.2	18.6	3.6	49.0
Gallatin	Jan. 8	11.6	2.0	18.0	26.0	6.0	—	—	—
Gallatin	Jan. 8	10.0	2.0	20.0	23.6	5.5	25.9	5.6	103.0
Gallatin	Jan. 3	28.3	7.4	26.1	46.0	12.7	55.3	14.4	3.7
Madison	Jan. 4	18.0	4.1	22.8	33.2	7.8	18.1	3.7	89.0
Madison	Jan. 4	20.9	4.8	22.9	36.4	8.5	—	—	92.5
Marias	Jan. 3	39.9	10.3	25.8	35.7	9.9	24.5	4.8	154.0
Tenmile, Lower	Dec. 29	10.2	1.7	16.7	21.0	4.2	27.8	6.0	53.2
Tenmile, Middle	Dec. 30	18.2	3.3	18.1	27.5	6.2	31.0	7.5	71.8
Tenmile, Upper	Dec. 30	20.8	4.1	19.7	30.4	7.7	35.6	9.4	70.8
Chessman Res.	Dec. 31	8.8	1.7	19.3	14.1	3.1	17.8	5.0	85.0
COLUMBIA									
Lookout	Jan. 3	70.0	16.3	23.0	82.0	24.2	—	—	—
Desert Mountain	Dec. 30	31.7	6.2	20.0	—	—	—	—	—
Big Creek	Jan. 2	68.0	19.9	29.4	—	—	—	—	—
North Fork Jocko	Jan. 13	88.0	23.0	26.2	—	—	—	—	—
Snow Lab. #16	—	—	—	—	—	—	—	—	—
					44.2	13.4	32.4	7.4	

U.S. DEPARTMENT OF COMMERCE, WEATHER BUREAU
 STATE OF MONTANA, MONTHLY PRECIPITATION FOR
 OCTOBER 1, 1950

STATIONS	1949		1949		1949		1950	
	OCTOBER	NOVEMBER	DECEMBER	JANUARY	Precip.	Dep.	Precip.	Dep.
<u>WEST OF DIVIDE</u>								
Butte	0.62	-0.17	0.53	0.13	0.34	-0.10	0.66	0.26
Deer Lodge	0.21	-0.47	0.27	-0.28	0.31	-0.20	0.67	0.08
Hamilton	1.20	0.29	2.03	1.22	0.71	0	2.23	1.44
Kalispell City	0.98	-0.08	1.42	0.07	0.97	-0.48	1.94	0.37
Missoula	0.74	-0.21	0.72	-0.18	0.65	-0.30	1.75	0.90
Trout Creek							8.71	5.02
Thompson Falls							4.71	2.70
<u>CENTRAL DIVISION</u>								
Babb	1.61	0.43	0.57	-0.42	1.64	0.70	--	--
Dillon	1.19	0.25	0.13	-0.67	0.18	-0.56	0.17	-0.56
Fort Fenton	1.86	1.14	0.23	-0.36	1.28	0.77	--	--
Great Falls	0.90	0.04	0.05	-0.63	0.53	-0.12	0.91	0.30
Havre	1.41	0.74	0.03	-0.58	0.86	0.25	0.92	0.19
Helena WBO	0.28	0.33	0.15	-0.30	0.37	-0.10	1.05	0.41
Livingston	1.40	0.23	0.51	-0.29	0.53	-0.07	1.20	0.66
Lewistown Airport	1.82	1.46	0.18	-0.03	1.78	1.58	--	--
Mystic Lake	2.32	0.48	0.04	-1.54	1.41	0.37	--	--
<u>EASTERN DIVISION</u>								
Billings #2	2.21	1.90	0.02	-0.72	0.72	0.22	0.69	0.06
Circle	1.15	1.30	0.06	-0.51	0.39	-0.36	--	--
Frazer	0.20	1.02	0.05	-0.48	0.50	0.11	1.19	0.78
Malta	1.25	1.52	0	-0.41	0.62	0.16	0.90	0.43
Mildred	1.69	0.96	T	-0.37	0.51	0.19	0.19	-0.15
Medicine Lake	0.50	0.25	T	-0.33	0.35	0.07	0.87	0.56
Miles City	2.43	1.53	0.02	-0.55	0.20	-0.43	0.22	-0.44
Fort Peck	0.67	-0.08	T	-0.47	1.04	0.76	0.83	0.45
Summit (Marias Pass)							9.35	5.93
Yellowstone Park Wyoming							4.04	1.06
							0.11	0.11

STORAGE IN RESERVOIRS OF MONTANA

MISSOURI RIVER BASIN

RESERVOIR	Location or on Diversion from	Usable Capacity	AS OF JANUARY 31, 1950	
			This Month End	Contents January 1949
Lake Sewall	Missouri	37,800	29,240	22,980
Hauser Lake	Missouri	52,090	35,180	29,230
Ft. Peck Res.	Missouri	19,000,000	11,280,000	12,700,000
Ruby Res.	Ruby	38,500	---	---
Harrison Lake	Willow Cr.	17,760	---	---
Hebgen Res.	Madison River	345,000	207,600	246,900
Madison Res.	Madison River	41,000	34,280	33,800
Smith River Res.	Smith River	10,700	---	---
Gibbons Res.	N. Fk. Sun River	105,000	34,060	66,240
Willow Creek	N. Fk. Sun-Willow Cr.	32,300	2,540	18,000
Pishkun Res.	N. Fk. Sun River	32,000	19,160	16,360
Lower Two Medicine L.	Two Medicine River	14,000	0	0
Four Horns Res.	Badger Creek	20,000	5,880	9,800
Birch Creek Res.	Birch Creek	30,000	16,670	26,370
Lake Francis Res.	Birch Creek	112,000	81,710	98,960
Ackley Lake	Judith River	5,820	---	---
Durand Res.	N. Fk. Musselshell	7,010	---	3,660
Dead Man Basin	Musselshell River	52,500	---	---
Martinsdale Res.	So. Fk. Musselshell	23,100	---	14,050
Fresno Res.	Milk River	127,200	---	70,290
Nelson Res.	Milk River	66,800	---	---
Mystic Lake	W. Rosebud Creek	20,800	10,920	12,300
Glacier Lake	Rock Creek	4,200	---	---
Cooney Res.	Red Lodge Creek	27,500	---	---
Tongue Res.	Tongue River	73,900	---	---
Sherburne Lake Res.	Swiftcurrent Creek	66,100	33,590	---
Lake Helena	Missouri River	10,450	3,050	1,460

YELLOWSTONE RIVER BASIN

Buffalo Bill	Shoshone	456,600	221,125	205,900
Sunshine	Greybull	52,000	17,562	---
Pilot Butte	Wind River	30,000	10,212	---
Bull Lake	Wind River	155,000	15,262	---

COLUMBIA RIVER BASIN

Georgetown Lake	Flint Creek	31,000	18,790	28,360
E. Fk. Rock Cr. Res.	E. Fk. Rock Creek	16,040	---	---
Nevada Creek Res.	Nevada Creek	12,600	---	---
W. Fk. Bitterroot Res.	E. Fk. Bitterroot	31,700	---	10,000
Como Lake	Rock Creek	34,800	---	---
Flathead Lake(Sommers)	Flathead River	1,791,000	958,100	797,000
Little Bitterroot	Little Bitterroot	37,100*	26,500*	36,090*
Dry Fork Res.	Dry Fork Creek	6,700*	3,430*	2,730*
Mission Valley Res.	Mission Valley(Flathead)	105,000**	24,075**	22,391**

* Comprise two reservoirs on Dry Creek.

* Comprise two reservoirs on Little Bitterroot River.

** Comprise nine small reservoirs on Mission Valley Project, Indian Reclamation Service.

MONTANA SNOW SURVEYS February 1, 1950

MISSOURI BASIN DRAINAGE BASIN AND SNOW COURSE #*	No.	Elev. Survey 1950	Date Feb. 1 1950	Snow Depth (In.) 1950	SNOW MEASUREMENTS								Years of Record	
					Water Content (Inches) Average Data				February 1					
					Past Records	1949	1948	Feb.	1950	Avg.	%Avg.	Avg.		
JEFFERSON RIVER (Rock-Beaverhead)					8.6					10.0	86	2		
Lakeview Ridge	11B3	7400	2/1	33.6	12.0					12.0	100	2		
Lakeview Canyon	11E4	6930	2/1	44.6	9.0					10.0	90	13		
Kilgore (BIG HOLE)	11E12	6200	1/28	38.0										
Gibbons Pass	13D2	7100	1/29	67.0										
MADISON RIVER														
Hebgen	11E5	6550	2/1	28.8	7.7									
West Yellowstone	11E7	6700	2/1	35.4	10.0									
GAILLATIN RIVER														
Mystic Lake	10D2	6600	1/29	14.5	2.5									
New World	10D1	6700	1/29	19.2	3.2									
21-Mile	11E6	7150	2/1	49.2	14.5									
MISSOURI RIVER MAIN STEM														
Chessman Res.	12C5	6200	2/3	14.0	3.4									
Picnic Grounds	12C6	6500	2/1	14.0	2.1									
Tennile, Lower	12C2	6250	2/1	21.1	4.6									
Tennile, Middle	12C3	6800	2/2	30.7	6.9									
Tennile, Upper	12C4	8000	2/2	34.2	8.4									
(MARIAS RIVER)														
Marias Pass	13A5	5250	2/2	65.6	20.6									
Snow Lab. #16	13A9	5200	2/2	67.9	21.2									

* Adjacent Basin

MONTANA SNOW SURVEYS February 1, 1950

MISSOURI BASIN DRAINAGE BASIN AND SNOW COURSE ***	No.	Elev. 1950	Date Feb. 1 1950	Snow Depth (In.) 1950	SNOW MEASUREMENTS (Inches)								Years of Record	
					Water Content				Average Data					
					Past Records		1949	1949	February 1 Avg.	%Avg.	April 1 Avg.	%Avg.		
YELLOWSTONE RIVER TRIBUTARIES IN WYOMING														
UPPER YELLOWSTONE					11.6	10.2	7.9	9.0	129	15.3	76	58	4	
Canyon	10E3	7750	2/1	46.2	4.3	6.1	5.9	5.8	74	7.4	91	96	3-13	
Cook City	10D7	7400	2/2	22.0	8.1	8.4	5.2	5.1	159	8.9	12	12	5-14	
Lake Camp	10E4	7850	2/1	35.2	30.1	7.5	8.6	6.6	114	7.8	51	51	20	
Lupine	10E1	7300	2/2	20.1	21.6	25.3	19.1	30.5	71	42.0	57	57	20	
Lewis Lake Divide	10E9	7900	1/17	84.0	16.9	19.2	12.0	21.7	78	29.1	14	14	20	
Aster Creek	10E8	7700	1/17	75.0									20	
LOWER YELLOWSTONE (Wind River)														
Brooks Lake #3	10F2	9200	2/2	73.3	21.9	17.3	13.1	13.1	167	19.7	111	111	2	
Burroughs Creek	9F6	8800	1/31	60.4	15.3	9.8	-----	-----	-----	-----	-----	-----	2	
Dinwoodie	9F10	10000	2/4	48.7	13.4	9.1	-----	-----	-----	-----	-----	-----	2	
Dry Creek	9F2	8590	2/3	34.1	8.2	5.1	-----	-----	-----	-----	-----	-----	2	
Du Noir	9F5	8750	2/3	39.9	10.5	6.2	5.7	5.7	184	9.3	113	113	8	
Geyser Creek	9F3	8500	2/1	34.5	8.0	6.3	-----	-----	-----	-----	-----	-----	2	
Hobbs Park	9G2	10000	1/29	71.3	21.3	12.8	-----	-----	-----	-----	-----	-----	2	
Little Warm	9F4	9500	2/1	59.5	16.7	6.8	5.9	5.9	198	9.9	118	118	1	
Mosquito Park	9G3	9500	1/29	44.6	11.7	6.0	4.8	4.8	129	6.2	100	100	5	
Sheridan	9F1	7500	1/31	26.9	6.2	6.3	5.2	5.2	156	7.4	110	110	5	
St. Lawrence	9F11	9000	1/30	31.5	8.1	5.7	-----	-----	-----	-----	-----	-----	2	
Trout Creek	9G1	8400	1/29	22.2	5.1	5.8	18.0	18.0	146	26.8	99	99	13	
Togwotee Pass	10F1	9600	2/2	88.0	26.4	20.9	17.1	17.1	161	21.0	88	88	13	
Black Rock	10F3	8600	2/2	67.0	18.4	15.7	11.4	11.4	-----	-----	-----	-----	2	
(POPO AGIE RIVER)														
Blue Ridge	8G2	9500	1/27	47.7	13.8	10.0	-----	-----	-----	-----	136	136	13	
Grannier Meadows	8G4	9000	1/27	39.2	16.2	11.1	8.2	8.2	-----	-----	11.9	11.9	2	
Sawmill Glade	8G1	8500	1/27	16.5	4.9	5.9	-----	-----	-----	-----	-----	-----	2	
South Pass	8G3	9000	1/27	56.2	14.8	11.7	-----	-----	-----	-----	-----	-----	2	

* Adjacent Basin

MONTANA SNOW SURVEYS February 1, 1950

MISSOURI BASIN

AND
SNOW COURSE **

DRAINAGE BASIN	No.	Elev.	Date of Survey 1950	Snow Depth (In.) 1950	SNOW MEASUREMENTS						Years of Record	
					Water Content (Inches)			Average Data				
					Feb. 1 1950	Past Records 1949	February 1 1948	Feb. 1 1950	Past Records 1949	February 1 1948		
<u>BIG HORN RIVER</u>												
Beavers Mill	9F8	8900	1/30	32.7	6.5	5.5						2
Owl Creek	8F1	8700	1/31	21.2	4.8	4.2						2
(SHOSHONE RIVER)												
East Entrance	10E6	7000	2/5	28.6	8.6	10.7						2
Sylvan Pass	10E5	7100	2/5	40.1	12.8	11.0						8
<u>UPPER COLUMBIA RIVER IN MONTANA</u>												
<u>FLATHEAD RIVER</u>												
Big Creek	13B3	6750	1/30	94.0	30.0	---						1
Desert Mountain	13A2	5600	2/2	48.7	13.7	---						1
Marias Pass	13A5	5250	2/2	65.6	20.6	12.6						14
North Fork Jocko	13B7	6330	2/2	94.0	30.9	21.2						1
Snow Lab. #16	13A9	5200	2/2	67.9	13.4	9.8						3
<u>UPPER CLARK FORK</u>												
Intergaard	13C4	6450	2/1	24.0	4.7	6.3						5
Picnic Grounds	12C6	6500	2/1	14.0	2.1	3.9						2
Rainy Lake	13B6	4300	2/2	38.5	11.4	9.4						4
Southern Cross	13C5	6500	2/1	13.0	2.5	4.3						5
Stuart Mill	13C6	6500	2/1	19.0	3.4	4.5						5
<u>BITTERROOT</u>												
Gibbons Pass	13D2	7100	1/29	67.0	17.0	13.7						10
Nezperce Camp	14D2	5580	2/2	33.5	8.6	13.8						13
Nezperce Pass	14D1	6575	2/2	38.1	9.6	13.5						13
* Powell Pasture **	14C3	3700	1/29	42.0	12.0	16.3						12
* Packers Meadow **	14C2	5700	1/30	81.0	24.0	19.5						13

* Adjacent Basin
** Point Samples

MONTANA SNOW SURVEYS February 1, 1950

MISSOURI BASIN
DRAINAGE BASIN
AND
SNOW COURSE **

KOOTENAI RIVER IN CANADA	SNOW MEASUREMENTS										Years of Record
	No.	Elev.	Date of Survey 1950	Snow Depth (In.) 1950	Average Data			Water Content (Inches)			
					Feb. 1 1950	Past Records 1949	February 1 1948	Avg.	%Avg.	April 1 Avg.	%Avg.
Fernie	Carada	3500	1/31	44.8	11.7	6.8	4.9	5.2	225	6.7	175
Gray Creek	Canada	5100	1/30	47.2	12.5	12.1	8.7	9.8	138	4.1	-----
Marble Canyon	Canada	5000	1/31	51.4	12.9	7.9	9.0	12.9	77	11.7	84
Nelson Creek	Canada	3050	1/30	36.1	9.9	14.6	5.3	4.9	106	4.6	103
Sinclair Pass	Canada	4500	1/28	28.9	5.2	3.2	9.0	9.9	115	13.9	82
Sullivan Mine	Canada	5100	2/1	45.3	11.4	4.7	5.0	5.6	145	-----	3
Upper Elk River	Canada		1/31	35.0	8.1	7.2	7.2	7.2	100	4.1	176
Kimberley	Canada	3750	1/28	31.5	-----	-----	-----	-----	-----	-----	3

* Adjacent Basin

Federal - State - Private COOPERATIVE SNOW SURVEYS

Furnishes the basic data necessary for forecasting water supply for irrigation, domestic and municipal water supply, hydro-electric power generation, navigation, mining and industry

“WATER IS THE WEST’S GREATEST RESOURCE”